

Training Materials for Scaling-up Climate Change Adaptation and Modified Procedures



Cambodia Climate Change Alliance (CCCA)

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Paper prepared under the
Coastal Adaptation and Resilience Planning (CARP) Component,
Cambodia Climate Change Alliance

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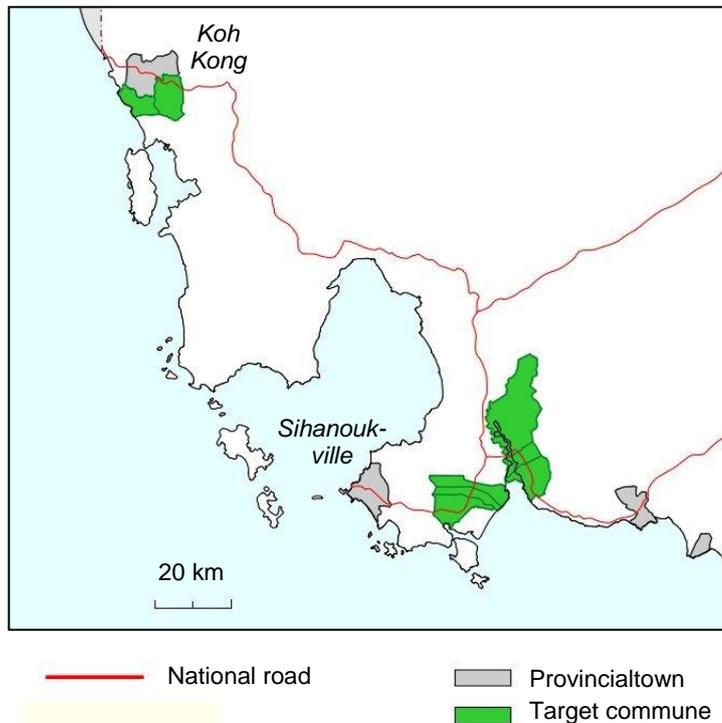
Contents

The CARP Target Communes.....	ii
Acknowledgement.....	ii
Summary.....	iii
1 Introduction	1
2 Background.....	1
3 Approach.....	2
4 Activities and Training Documents	2
4.1 Climate-related Concerns and Mitigation Opportunities.....	2
4.2 Integrated Farming Systems and Climate-resilient Rice Cultivation.....	4
4.3 Community Fisheries.....	5
4.4 Improved Livestock Breeding	5
4.5 Guidance on Climate-resilient Irrigation Design.....	6
4.6 Integrating Climate Change Considerations into Commune Development Planning.....	6
References.....	7

The CARP Target Communes

Activities are conducted in 6 target communes in Prey Nob District, Preah Sihanouk Province, and 2 target communes in MondolSeima District, Koh Kong Province.

Figure 1: Location of the CARP target communes



Acknowledgement

This Report was produced under Coastal Adaptation and Resilience Planning Component, implemented for CCCA. The work is comprehensively based on findings of a recent capacity needs assessment conducted under the project.

The Team gratefully acknowledges the support and guidance provided by HE Dr. Say Sam Al, Minister of Environment; HE Dr. MokMareth, Former Senior Minister and Minister of Environment; HE Dr. Lonh Heal, Director General, MOE; Dr. Tin Ponlok, Deputy Director General and Head of the Trust Fund Secretariat, MOE; Mr. Sum Thy, Director of Climate Change Department, MOE, and Dr. Vann Monyneath, National Project Coordinator. Many people from MOE, other ministries, the Governors' offices, the province and district departments and the commune councils kindly shared their knowledge and suggestions.

The Team sincerely thanks everyone who shared their time and knowledge, and looks forward with enthusiasm and confidence to a continued fruitful dialogue.

Summary

The Coastal Zone of Cambodia is exposed to actual and imminent climate-related threats to its particular livelihoods and ecosystems.

The Coastal Adaptation and Resilience Planning (CARP) Component conducts climate-related pilot and demonstration activities in target communes in the coastal area. Training is provided throughout the work as an important cross-cutting perspective in support of successful (and sustainable) implementation of the pilot activities, and with the wider objective of climate-related capacity-building at the sub-national level.

A substantial amount of courseware has been (and will be) produced in this connection, from case to case suited for application at the province and district levels, the commune level, and the household level, and with due consideration to the particular climate-related concerns and opportunities in the coastal area.

This paper provides an overview of training documents (presently 20 documents) that have been or are being produced or upgraded and applied in connection with the CARP activities. These documents will be available for wider use and for up-scaling of activities.

1 Introduction

The Coastal Zone of Cambodia is exposed to actual and imminent climate-related threats to its particular livelihoods and ecosystems.

The Coastal Adaptation and Resilience Planning (CARP) Component conducts climate-related pilot and demonstration activities in target communes in the coastal area.

Training is provided throughout the work as an important cross-cutting perspective in support of successful (and sustainable) implementation of the pilot activities, and with the wider objective of climate-related capacity-building at the sub-national level and mainstreaming climate change considerations into Commune Development Plans.

A substantial amount of courseware has been (and will be) produced in this connection, from case to case suited for application at the province and district levels, the commune level, and the household level, and with due consideration to the particular climate-related concerns and opportunities in the coastal area.

This paper provides an overview of training documents produced or upgraded and applied in connection with the CARP activities.

2 Background

The Coastal Adaptation and Resilience Planning (CARP) Component of Cambodia Climate Change Alliance has two outcomes:

- 1: *'Improved climate change knowledge integrated into land use and coastal development plans'*.
- 2: *'Increased resilience of coastal communities and coastal ecosystem buffers to climate change and improved livelihoods'*.

These outcomes are pursued by implementation of pilot and demonstration activities in the target communes, in order to achieve tangible social, economic and environmental benefits in their own right, and as a platform for replication elsewhere in the Coastal Zone and beyond.

Training activities are closely coordinated with parallel efforts under the *Vulnerability Assessment and Adaptation Programme for Climate Change within the Coastal Zone of Cambodia*, which includes province-level climate change vulnerability assessment and adaptation planning. Courseware produced in this connection includes a glossary and a training manual.

Parts of the training documentation build on outputs of the NAPA and the PPCR Phase 1, with modifications to address the particular coastal context.

3 Approach

The scope of the pilot and demonstration activities (and the related training) has been developed by a stepwise, participatory approach:

- 1 Initial consultations and a preliminary needs assessment took place in early 2012, and a long-list with suggestions on 20 potential demonstration activities was compiled.
- 2 On this basis, a dialogue with the Technical Working Groups and commune chiefs, and community stakeholder meetings, were conducted in September-November 2012, in order to establish an agreed shortlist of priority initiatives.
- 3 The priority initiatives were elaborated (with occasional amendments with a view to implementation practicalities), and the '*Detailed Implementation Plan for Demonstration Activities at the Coast*' was prepared in March 2013.

Figure 2: Consultations



All activities include elements of awareness-building and education. The Technical Working Groups provide a key platform in this connection. Following initial training-of-trainers, these bodies are able to continue, consolidate and expand the training efforts.

4 Activities and Training Documents

This chapter lists papers, technical notes and guidelines produced under each activity. Additional courseware includes slide presentations and plenary/group discussion formats. Unless otherwise stated, the documents are available in Khmer and English.

4.1 Climate-related Concerns and Mitigation Opportunities

This training takes place at the village level and covers 31 coastal villages. It covers a broad, basic introduction to climate-related concerns and mitigation opportunities in the context of the particular agenda of the Coastal Zone. The aim of the material is to increase awareness in local communities to climate change.

The work is conducted by Save Cambodia's Wildlife (SCW), drawing on this organization's experience from similar training elsewhere in Cambodia (under the NAPA Follow-up Project). SCW has produced the courseware, undertakes training-of-trainers from the Technical Working Groups and participates in pilot implementation at the commune level. Members of the Technical Working Groups undertake the continued training at the commune level, also involving schools. The continued training is coordinated by the Department of Environmental Education in MoE.

Courseware produced includes

- A flip-chart suited for community/ household level awareness-building and education about climate change adaptation. This tool is based on a previous one produced under the NAPA Follow-up Project, but emphasizes the particular climate change agenda for the coastal zone. It has 21 pages with thematic illustrations on the front side and technical notes on the rear side, as exemplified below.
- A booklet including the same material as the flipchart. The booklet has been printed in 1000 copies and is distributed to participants so that the information can reach up to 6000 persons or more.
- A related Teacher Training Manual.

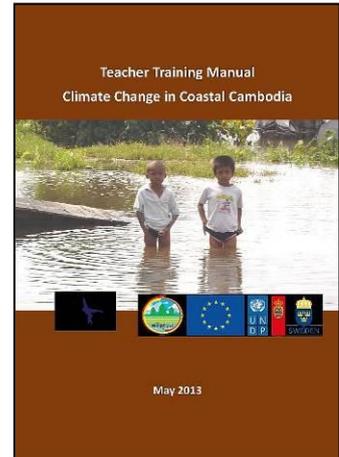
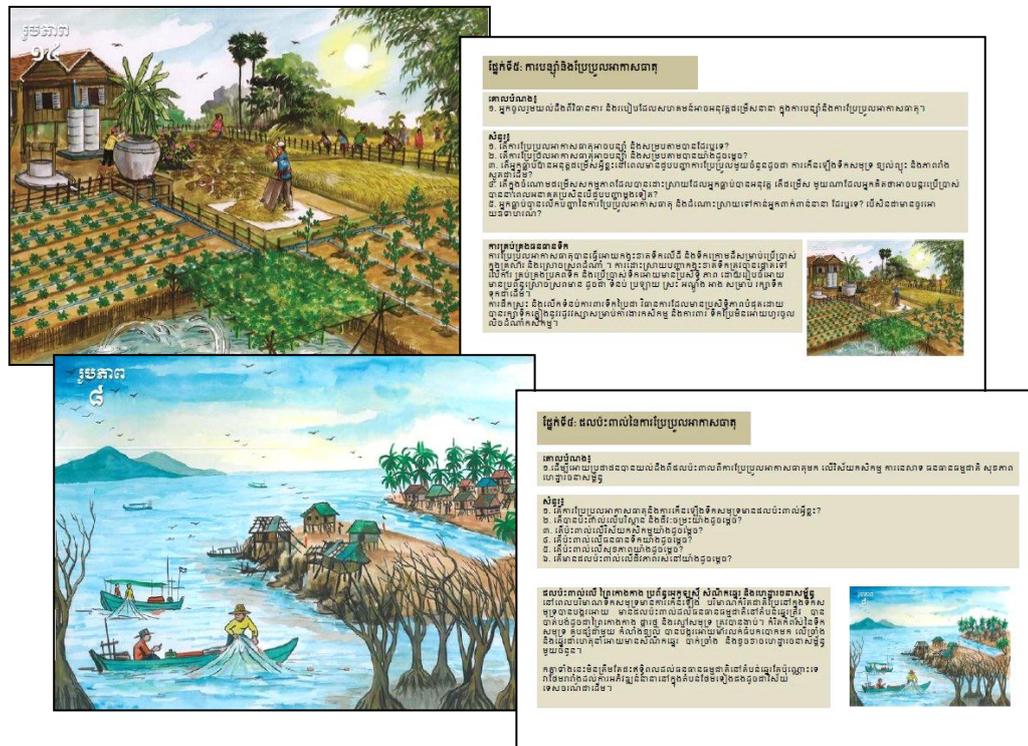


Figure 3: Pages from the flip chart



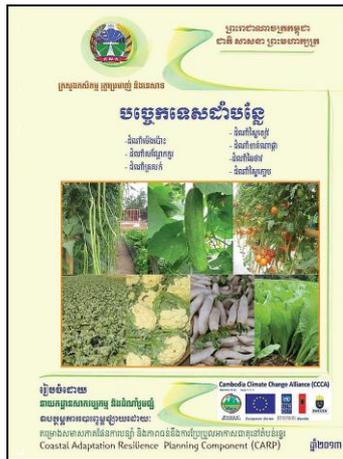
4.2 Integrated Farming Systems and Climate-resilient Rice Cultivation

These pilot activities are implemented by Department of Agricultural Education, MAFF; and CARDI. Activities include a training programme in multi-scale climate change adaptation strategies and climate resilient integrated farming (integration of crops, livestock, fish, water), for (a) agricultural/fisheries extension staff; and (b) households/families. This training is preceded by a training-of-trainers activity. This training is conducted in 31 villages and for approximately 900 households.

Short/medium term rice varieties may enable harvest before onset of heavy flooding and sea water surges, thus improving the critical climate resilience of particularly wet season paddy cultivation.

The following training documents have been developed for previous applications and have been modified for use under the CARP. They are available in Khmer:

- Chicken husbandry at the family level
- Pig husbandry at the family level
- Sustainable fisheries
- Introduction to the System of Rice Intensification (SRI)
- Vegetable cultivation
- Fruit tree cultivation
- Rice cultivation
- Soil fertility management
- Post-harvest technology



4.3 Community Fisheries

This pilot activity is implemented by the Fisheries Administration. The objective is a strengthening of regulatory measures and their enforcement, in support of the sustainable and climate-resilient livelihood of fishing communities.

Training documents cover the following topics:

- Leadership and facilitation
- Fish catch monitoring

4.4 Improved Livestock Breeding

This activity is implemented with participation by Center for Livestock and Agriculture Development (CeLAgrid) in collaboration with the Project Management Unit, MAFF. It aims to introduce a revolving scheme for improved breeds of small livestock (no cattle, but pigs, poultry, goats and similar), as tested successfully in Cambodia, Laos and elsewhere. This is in response to increased flooding problems as livestock are moveable and provide a climate-resilient livelihood in support of household income, nutrition and food security. Approximately 310 households are participating in the training.

The following training documents are used for previous applications and have been modified for use under the CARP:

- Improving chicken raising in rural areas to control bird flue
- Technique for raising chicken, pigs and cattle by smallholders
- Technique for raising pigs by smallholders
- Technique for raising cattle by smallholders
- Care and feed of pregnant and lactating sows and piglets 1-35 days

Figure 4: Small-scale husbandry, TuekL'ak Commune



4.5 Guidance on Climate-resilient Irrigation Design

In the coastal area of Cambodia, the climate-related challenges within water availability for cultivation are already clearly visible. This activity aims to support efficient and climate-resilient irrigation. In the specific context of the coastal climate adaptation needs (facing concerns such as sea level rise, saline intrusion, storms and rainfall irregularities), it covers climate-related considerations of hydraulic feasibility; design; and operation.

The following training document has been produced:

- CARP (February 2013): Climate-resilient Irrigation. Guidance paper prepared for Cambodia Climate Change Alliance (CCCA) under the Coastal Adaptation and Resilience Planning Component

The paper presents suggestions on climate-resilient irrigation in the specific context of the coastal climate adaptation needs in the CARP pilot area. It covers climate-related considerations of hydraulic feasibility; design; and operation. For each of these aspects, some thoughts are listed on guiding principles; suggestions and recommendations; and options for consideration, depending on the context.

Figure 5: Regulator for control of drainage, flooding and saline intrusion, Sameakki Commune



4.6 Integrating Climate Change Considerations into Commune Development Planning

This activity aims to incorporate climate change considerations into the commune development planning process, so that decisions and investments can be made with an understanding of climate change projections and/or the expectation of extreme weather events. Concrete demonstration actions will be done in each of the target communes based on the planned activities in the 2013 commune investment plans and implementing actions that will make the communes more resilient to climate change

impacts. The demonstration actions are conducted in cooperation with the commune councils, districts and the provincial working groups.

The following training document has been produced:

- CARP (October 2013): Guidelines for Integrating Climate Change Considerations into Commune Development Planning. Draft prepared under the Coastal Adaptation and Resilience Planning (CARP) Component, Cambodia Climate Change Alliance

These guidelines are intended as a supplement to existing guidelines and manuals for commune-level development and investment planning. They cover climate-related cause-effect relationships; an overview of climate change predictions; climate-related concerns and opportunities; and identification and assessment of measures to improve the climate resilience at the commune, village and household level.

References

The various training documents are comprehensively based on the following reports:

CARP (March 2013): Detailed Implementation Plan for Demonstration Activities at the Coast. Draft Report prepared under the Coastal Adaptation and Resilience Planning (CARP) Component, Cambodia Climate Change Alliance

CARP (December 2012): Support to CC Education, Awareness-building and FWUC Strengthening. Final report prepared for Cambodia Climate Change Alliance (CCCA) under the Coastal Adaptation and Resilience Planning Component

CARP (November 2012): Analysis of Costs & Benefits of Modifying Agricultural Practices for Climate Change at the Coast. Final report prepared for Cambodia Climate Change Alliance (CCCA) under the Coastal Adaptation and Resilience Planning Component

CARP (October 2012a): Assessment of Coping Strategies in the Coastal Zone of Cambodia. Final report prepared for Cambodia Climate Change Alliance (CCCA) under the Coastal Adaptation and Resilience Planning Component

CARP (October 2012b): Assessment of Community Vulnerability and Risks from Climate Change in the Coastal Zone of Cambodia. Final report prepared for Cambodia Climate Change Alliance (CCCA) under the Coastal Adaptation and Resilience Planning Component

CARP (October 2012c): Implementation Capacity of Demonstration Activities. Final report prepared for Cambodia Climate Change Alliance (CCCA) under the Coastal Adaptation and Resilience Planning Component

CARP (July 2012): Vulnerability of Existing Agricultural Practices. Final report prepared for Cambodia Climate Change Alliance (CCCA) under the Coastal Adaptation and Resilience Planning Component